

CLAIMS

- 1 1. A printing system, comprising:
2 a laser configured to produce a printing beam for printing a code on a
3 product, the laser being at most a 25 Watt laser;
4 a housing including a printing beam exit member through which the
5 printing beam exits the housing; and
6 an optics assembly within the housing, the optics assembly focussing
7 the printing beam on a product which is adjacent to the housing.
- 1 2. The printing system of claim 1, wherein the printing beam exit
2 member is movable relative to the housing;
- 1 3. The printing system of claim 1, wherein a bearing couples the printing
2 beam exit member to the housing.
- 1 4. The printing system of claim 3, wherein the bearing has an axis of
2 rotation and the printing beam passes through the bearing along the axis of
3 rotation.
- 1 5. The printing system of claim 1, further comprising:
2 a negative lens for expanding the printing beam and a positive lens for
3 focussing the printing beam.
- 1 6. The printing system of claim 1, further comprising:
2 a collimating lens positioned between the negative lens and the
3 positive lens.

- 1 7. The printing system of claim 1, further comprising:
2 electronics for correcting the non-linearity of one or more lenses
3 through which the printing beam passes.
- 1 8. The printing system of claim 1, further comprising:
2 a print zone light source for producing a print zone beam for defining a
3 print zone within which the code is printed, the print zone beam exiting the
4 housing through the printing beam exit member.
- 1 9. The printing system of claim 1, further comprising:
2 one or more mirrors for reflecting the printing beam in a desired
3 direction.
- 1 10. The printing system of claim 9, wherein at least one of the one or more
2 mirrors are connected to a motor configured to move the mirrors so as to
3 control the direction that the printing beam is reflected.
- 1 11. The printing system of claim 10, further comprising:
2 electronics for controlling the motors so as to steer the printing beam
3 from one location to another.
- 1 12. The printing system of claim 1, wherein the laser is an air cooled laser.
- 1 13. The printing system of claim 1, wherein the laser is at most a 20 Watt
2 laser.

1 14. The printing system of claim 1, wherein the laser is at most a 15 Watt
2 laser.

1 15. The printing system of claim 1, wherein the printing system weighs
2 less than 25 pounds.

1 16. The printing system of claim 1, wherein the printing system weighs
2 less than 22 pounds.

1 17. The printing system of claim 1, wherein the printing system includes a
2 housing having a volume of less than 1200 cubic inches.

1 18. The printing system of claim 1, wherein the printing system includes a
2 housing having a volume of less than 600 cubic inches.